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10/522,285

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Engelbertus Cornelius Vossen

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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EXAMINER

PERRY, ANTHONY T

ART UNIT

PAPER NUMBER

2879

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/522,285 | Applicant(s) VOSSEN ET AL. | |
| | Examiner ANTHONY T. PERRY | Art Unit 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The Amendment filed on 3/16/2009, has been entered and acknowledged by the Examiner.

New claims 15-17 have been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 5, 7, 8, 9, 10, 13, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Snijkers-Hendrickx et al. (US 2001/0026122).

Regarding claim 1, Snijkers-Hendrickx et al. disclose a low-pressure mercury vapor discharge lamp comprising a discharge vessel (10), the discharge vessel enclosing, in a gastight manner, a discharge space provided with a filling of mercury and a rare gas, the discharge vessel comprising a luminescent layer (17) and a means for maintaining an electric discharge in the discharge space, a portion of the inner surface of the discharge vessel facing the discharge space being provided with a protective layer (16) adjacent to the luminescent layer (17), characterized in that the protective layer comprises a phosphate of scandium (for example, see Fig. 1B and the abstract).

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Regarding claim 2, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, wherein the protect layer further comprises a phosphate of calcium and/or strontium (for example, see the abstract).

Regarding claim 3, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, wherein the protect layer further comprises a borate and/or phosphate of gadolinium (for example, see the abstract and paragraph 0019).

Regarding claims 5 and 7, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, wherein the protective layer further comprises an alkaline earth borate, and wherein a thickness of the protective layer is in a ranges from 0.1 to 50 microns and 1 to 20 microns (for example, see the abstract and paragraph 0026).

Regarding claim 8, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, wherein the discharge vessel comprises at least one stem (31), said stem being provided with the protective layer (16).

Regarding claim 9, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, the discharge vessel is made from a glass comprising silicon dioxide and sodium oxide with the percentages by weight as 60-80 % SiO₂, 10-20 % Na₂O (for example, see paragraph 0035).

Regarding claim 10, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, the discharge vessel is made from a glass comprising silicon dioxide and sodium oxide with the percentages by weight as 70-75 % SiO₂, 15-18 % Na₂O, 0.25-2 % K₂O by weight (for example, see paragraph 0035).

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Regarding claim 13, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, wherein the luminescent material comprises a mixture of green-luminescent, terbium-activated cerium- magnesium aluminate, blue-luminescent barium-magnesium aluminate activated by bivalent europium, and red-luminescent yttrium oxide activated by trivalent europium (for example, see paragraph 0038).

Regarding claim 16 Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, wherein the protective layer further comprises a phosphate of yttrium, or a further rare earth metal (for example, see the abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 6, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snijkers-Hendrickx et al. (US 2001/0026122) in view of Watanabe (US 5,801,483).

Regarding claims 4, 14, and 15 Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, further comprising a borate of an alkaline earth metal and/or of scandium, yttrium, or a further rare earth metal (for example, see the abstract), but do not specifically recite the protective layer further comprising aluminum oxide comprising particles with an effective particle size in the range of .1 to .8 microns. However, Watanabe teaches including aluminum oxide comprising particles with an effective particle size in the range of .1 to .8 microns in the protective layer (col. 6, lines 27-30). Watanabe teaches that the

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aluminum oxide having such a particle size improves the lumen maintenance factor and color rendition of the lamp (col. 6, lines 22-30). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include aluminum oxide comprising particles with an effective particle size in the range of .1 to .8 microns in the protective layer, so as to improve the lumen maintenance factor and color rendition of the lamp.

Regarding claim 6, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 5, but does not specifically recite the SrB_4O_7 being included in the protective layer. However, Watanabe teaches including SrB_4O_7 in the protect layer (col. 3, lines 22-59). Watanabe teaches that by including SrB_4O_7 the lamp can produce a catalytic reaction for preventing dust, nicotine, oil stains from accumulating on the vessel without producing harmful UV-b rays and without reducing the visible luminous flux (for example, see col. 1, lines 54-62, col. 3, lines 22-59, and col. 7, lines 6-13).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Snijkers-Hendrickx et al. (US 2001/0026122) in view of Matsuo et al. (US 5,869,927).

Regarding claim 17, Snijkers-Hendrickx et al. disclose the low-pressure mercury vapor discharge lamp of claim 1, but does not specifically recite an inner side of the luminescent layer facing the discharge space being provided with an additional protective layer. However, Matsuo et al. teach providing protective layers (4, 5) on both sides of the luminescent layer (3) (for example, see Fig. 10). Matsuo teaches that the additional protective layer (5) is provided on an inner side of the luminescent layer facing the discharge space in order to protect the luminescent layer (3) from being bombarded by mercury atoms in the gas fill (for example, see col. 5, lines 39-60). Accordingly, it would have been obvious to one having ordinary skill in the art at the

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time the invention was made to provide an additional protective layer to the inner side of the luminescent layer facing the discharge space of the lamp taught by Snijkers-Hendrickx, in order to protect the luminescent layer from degradation and to prevent the mercury of the gas fill from being absorbed by the luminescent material.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The

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examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anthony Perry/

Anthony Perry
Patent Examiner
Art Unit 2879

/Peter J Macchiarolo/
Primary Examiner, Art Unit 2879